|   | Index of Claims  |           |             |          |             |          |          |          |          |            |          |          |    | Application/C ntrol No. |             |           |        |              |          |          |          |          |               | Applicant(s)/Patent under Reexaminati n |                |           |              |          |                 |          |                      |          |          |  |  |
|---|------------------|-----------|-------------|----------|-------------|----------|----------|----------|----------|------------|----------|----------|----|-------------------------|-------------|-----------|--------|--------------|----------|----------|----------|----------|---------------|---|----------------|-----------|--------------|----------|-----------------|----------|----------------------|----------|----------|--|--|
|   |                  |           |             |          |             |          |          |          |          |            |          |          |    | 10/546,001              |             |           |        |              |          |          |          |          |               |   | HAMAOKA ET AL. |           |              |          |                 |          |                      |          |          |  |  |
|   |                  |           |             |          |             |          |          |          |          |            |          |          |    |                         | Examiner    |           |        |              |          |          |          |          |               |   |                | Art Unit  |              |          |                 |          |                      |          |          |  |  |
|   |                  |           |             |          |             |          |          |          |          |            |          |          |    |                         | Rita Leykin |           |        |              |          |          |          |          |               | 2837                                    |                |           |              |          |                 | $\perp$  |                      |          |          |  |  |
|   | (Through numeral |           |             |          |             |          |          |          |          |            |          |          |    |                         |             | 7         | _      | Г            |          |          |          |          |               |   |                |           |              |          |                 |          |                      |          |          |  |  |
|   |                  |           | 1           | R jected |             |          |          |          | L        | Cancelled  |          |          | ed | 1                       |             |           | N      | Non-Elected  |          |          | đ        | 1        | \L            | Appeal                                  |                |           |              |          |                 |          |                      |          |          |  |  |
|   |                  |           | =           | Allowed  |             |          |          |          | +        | Restricted |          |          |    |                         |             | ı         | lr     | Interference |          |          | •        | (        |               | Objected                                |                |           |              |          |                 |          |                      |          |          |  |  |
|   | <u> </u>         | im        |             |          |             | _        | Date     |          |          |            | _        | Claim    |    |                         |             |           |        | Dat          | le       |          |          | _        | Claim         |   | Ť              |           | Date         |          |                 |          | _                    |          |          |  |  |
| , |                  |           |             |          |             |          | Ī        |          |          | П          |          | 7        |    |                         | Τ           | П         |        | Ť            |          |          | П        | $\vdash$ | $\overline{}$ | 1                                       | T              | Γ         | Ė            | Ñ        | ŤП              |          |                      | П        |          |  |  |
| i | Final            | Original  | 2/17/0      |          |             |          |          |          |          |            |          | Final    |    | Original                |             |           |        |              |          |          |          |          |               | Final<br>Original                       |                |           |              |          |                 |          |                      |          |          |  |  |
|   | ~                | 1         | 8           | $\dashv$ | $\dashv$    | $\dashv$ |          | ┝        | ╀╌       | ├          | Н        | -        |    | 51                      | ╅           | +         | +      | 十            | -        | Н        | Н        | Н        | H             | 10                                      | _1_            | ╁         | ╁            | $\vdash$ | Н               | _        | Н                    | ┪        | $\dashv$ |  |  |
| i |                  | 2         | ٧           |          | $\Box$      |          |          |          |          |            | 口        |          | Τ  | 52                      |             | I         | I      | T            |          |          |          |          |               | 10                                      | 2              | 丰         |              |          |                 |          |                      | $\Box$   | $\Box$   |  |  |
|   | <u> </u>         | 3         | < <         | $\dashv$ | $\dashv$    | -        | _        | $\vdash$ | ┝        | ┡          | Н        | -        |    | 53<br>54                | +           | +         | ╀      | ╀            | ┝        | Н        | Н        | Н        | $\vdash$      | 10:                                     |                | +         | ╀            | -        | Н               |          | Н                    | -        |          |  |  |
|   |                  | 5         | Ÿ           | $\dashv$ | ╛           |          |          |          | $\vdash$ |            | Н        | $\vdash$ | +  | 55                      | 1           | $\pm$     | T      | t            |          | Н        |          | H        | E             | 10                                      |                | $\dagger$ |              |          | Н               |          | Н                    | ╛        |          |  |  |
| į |                  | 6         | >           | $\Box$   | $\sqsupset$ |          |          |          |          |            |          |          |    | 56                      | T           | Ţ         | I      | Γ            |          |          |          |          |               | 100                                     |                | I         | I            |          |                 |          | П                    | $\Box$   |          |  |  |
|   | 460              | 7<br>⊞836 | <b>(</b>  < | $\dashv$ | $\dashv$    | $\dashv$ |          | -        | ┞        | ⊢          | Н        | $\vdash$ | ╀  | 57<br>58                | ╫           | ╀         | ╀      | ╀            | ⊢        | Н        | Н        | Н        | $\vdash$      | 10                                      |                | ┿         | $\vdash$     | ┞        | Н               |          | $\vdash \vdash$      | -        | $\dashv$ |  |  |
|   |                  |           | ٧           | -        | ┪           |          | H        | $\vdash$ | ┢        | ┢          | Н        | $\vdash$ | +  | 59                      | +           | +         | T      | +            |          | Н        | Н        | H        | $\vdash$      | 109                                     |                | +         | ╁            | H        | Н               | _        | H                    | 一        | $\dashv$ |  |  |
|   |                  | 10        | >           |          | $\Box$      |          |          |          |          |            |          |          |    | 60                      | I           | I         | I      |              |          |          |          |          |               | 110                                     | 2              |           |              |          |                 |          |                      |          |          |  |  |
|   | _                |           | >           | -        |             | _        | Щ        | ┡        | ┞        | L          | Н        | -        |    | 61                      | +           | +         | ╀      | ╀            |          | Н        | Щ        | $\vdash$ | $\vdash$      | 11                                      |                | +         | ₽            | L        | Н               |          | Н                    | 4        | $\dashv$ |  |  |
|   | -                | 12<br>13  |             | $\dashv$ | ᅱ           | $\dashv$ | -        | ┝        | ╁        | ┝          | Н        | $\vdash$ |    | 62<br>63                | +           | +         | ╀      | +            | -        | Н        | Н        | Н        | $\vdash$      | 11:                                     |                | ╁         | ╀            | ┝        | Н               | _        | Н                    | ┨        | $\dashv$ |  |  |
|   |                  | 14        | >           |          | 7           |          |          |          | T        | H          | Н        |          |    | 64                      | T           | t         | 十      | 十            | Н        | Н        | Н        |          | <b> </b>      | 114                                     |                | t         | T            | Г        | Н               |          | Н                    | 7        | $\neg$   |  |  |
|   |                  | 15        |             | $\Box$   | $\Box$      |          |          |          | Г        |            |          |          |    | 65                      | $\perp$     | Ţ         | Ε      | I            |          |          |          |          |               | 11                                      |                | I         | Ŀ            |          |                 |          | $\Box$               | $\Box$   |          |  |  |
|   |                  | 16<br>17  | >           |          | $\dashv$    | $\dashv$ | Н        | ┞        | ┞        | ⊢          | Н        | -        |    | 66<br>67                | ╀           | ╀         | +      | ╀            | H        | Н        | Н        | Н        | -             | 110                                     |                | +         | <del> </del> | -        | Н               | _        | H                    | -        | $\dashv$ |  |  |
|   | _                | 18        | ٧           | $\dashv$ | $\dashv$    | $\dashv$ | Н        | H        | H        | ┝          | Н        | $\vdash$ |    | 68                      | ┿           | ╁         | ╁      | ╁            | Н        | Н        | Н        | Н        | $\vdash$      | 111                                     | 3              | +         | ۲            | ┢        | Н               |          | Н                    | ┪        | $\dashv$ |  |  |
|   |                  | 19        | ٧           |          |             |          |          |          |          |            |          |          |    | 69                      |             | Ì         | T      |              |          |          |          |          |               | 119                                     | 9              | 工         | 上            |          |                 |          |                      |          |          |  |  |
|   | <u></u>          | 20        | <b>:</b> <  | _        | 4           | _        | Щ        | <u> </u> | ┞-       | <b> </b> - | Н        | _        |    | 70                      | $\perp$     | 1         | $\bot$ | 1            |          | Н        | Ц        |          |               | 120                                     |                | 1         | ŀ            | L        | Ш               |          | $\square$            | 4        | $\dashv$ |  |  |
|   |                  | 21<br>22  | < <         | +        | ┥           | $\dashv$ | -        | ┝        | ┝        | ┝          | Н        | <u> </u> |    | 71<br>72                | +           | +         | ╁      | ╀            | -        | Н        | Н        | Н        | $\vdash$      | 12                                      |                | ╁         | ╀            | ┝        | Н               |          | Н                    | ᅱ        | $\dashv$ |  |  |
|   |                  | 23        | >           |          | ╛           |          |          |          |          | Г          | П        |          | Т  | 73                      | $\top$      | $\dagger$ | 十      | T            | <b>†</b> | Н        | Н        | $\vdash$ | ┢             | 123                                     |                | +-        | †-           | H        | Н               |          | H                    | ┪        | $\neg$   |  |  |
|   |                  | 24        |             | $\Box$   |             | L        | П        |          |          |            |          |          | Ι  | 74                      |             | Τ         | I      |              |          |          |          |          |               | 124                                     | ŧ [            | I         |              |          |                 |          |                      |          |          |  |  |
|   |                  | 25<br>26  | ×           | -        | 4           | $\dashv$ | Н        | ┡        | ⊢        | ⊩          | Н        | - ├      |    | 75<br>76                | +           | +         | +      | ╀            | _        | Н        | Н        | Н        | $\vdash$      | 12                                      |                | +         | ╄            | L        | Щ               |          | Н                    | -        | $\dashv$ |  |  |
|   |                  |           | V           | $\dashv$ | $\dashv$    |          |          | ┝        | ⊢        | ┢          | Н        | -        |    | <del>///</del>          | ╅           | +         | ┿      | ╁            | Н        | H        | Н        | H        | $\vdash$      | 12                                      |                | ┿         | $\vdash$     | H        | Н               |          | Н                    | $\dashv$ | $\dashv$ |  |  |
|   |                  | 28        | ٧           | _ [      |             |          |          |          |          |            |          |          | Т  | 78                      | 土           | İ         | t      |              |          |          |          |          |               | 128                                     | 3              | 士         |              |          |                 |          | П                    |          | ╛        |  |  |
|   |                  | 29        | Н           |          |             |          | 7        | <u> </u> | L        | L          | Ш        | <u> </u> |    | 79                      | $\bot$      | Ļ         | Ļ      | ╀            |          | П        | $\Box$   |          |               | 129                                     | 2              | $\bot$    | Ļ            |          |                 | 1        | П                    |          | $\Box$   |  |  |
|   |                  | 30<br>31  | Н           | -+       | $\dashv$    | $\dashv$ |          | ⊢        | ├        | ⊢          | Н        | -        |    | 80<br>81                | +           | ╀         | ╀      | ╀            | ⊢        | Н        | Н        | $\dashv$ | $\vdash$      | 130                                     |                | ╀         | ┿            | H        | Н               | _        | Н                    | -        | ᅴ        |  |  |
|   |                  | 32        | Н           | $\dashv$ | 7           | $\dashv$ |          | Н        | Н        | 一          | Н        | $\vdash$ |    | 82                      | +           | ╁         | †      | ✝            | 1        |          | Н        | $\dashv$ | $\vdash$      | 13                                      |                | ╁         | •            | -        | Н               |          | H                    | ┪        | ᅱ        |  |  |
|   |                  | 33        |             | $\Box$   |             |          |          |          |          |            |          |          |    | 83                      | 工           | I         |        |              |          |          |          |          |               | 133                                     | 3              |           |              |          |                 |          |                      |          | コ        |  |  |
|   |                  | 34<br>35  |             |          | 4           | 4        | Н        | L        | L        | L          | Н        | $\vdash$ |    | 84                      | +           | 1         | 1      | +            |          |          | Н        |          | $\vdash$      | 134                                     |                | 4         | ┡            |          | Ш               |          | Н                    | _        | 4        |  |  |
|   |                  | 36        | Н           | +        | 1           | $\dashv$ | Н        | H        | -        | _          | Н        | -        |    | 85<br>86                | +           | ╀         | ╀      | ╁            | ⊢        | Н        | Н        | H        | $\vdash$      | 134                                     |                | ╀         | ⊢            | H        | $\vdash$        | _        | Н                    | -        | ⊣        |  |  |
|   |                  | 37        |             |          |             |          |          | L        |          |            | Н        |          | -  | 87                      | +           | t         | 十      | ╁            | ┪        | Н        | Н        | $\dashv$ | $\vdash$      | 137                                     |                | +         | $\vdash$     | H        | H               |          | H                    | ┪        | $\dashv$ |  |  |
|   |                  | 38        |             |          | $\Box$      |          |          |          |          |            | П        |          |    | 88                      | $\perp$     | T         | Τ      |              |          |          |          |          |               | 138                                     | 3              |           |              |          |                 |          |                      | $\Box$   | $\Box$   |  |  |
|   |                  | 39<br>40  | $\vdash$    | -        | $\dashv$    | 4        | Н        |          | H        | H          | Н        | $\vdash$ |    | 89<br>90                | +           | ╀         | ╀      | ╀            | Ι-,      | Н        | Н        | -        | $\vdash$      | 139                                     |                | +         | $\vdash$     | L        | H               | _        | Н                    | $\dashv$ | -1       |  |  |
|   |                  | 41        | H           | $\dashv$ | +           | ┪        | $\dashv$ | Н        | Н        | 一          | Н        | <u> </u> |    | 91                      | +           | +         | +      | +            | H        | Н        | Н        | $\dashv$ | $\vdash$      | 141                                     |                | +         | ┝            | H        | Н               | -        | $\dashv$             | $\dashv$ | $\dashv$ |  |  |
|   |                  | 42        |             | コ        |             |          |          |          |          | П          | 口        |          | 1  | 92                      | 工           | İ         | 上      | I            |          | ╛        |          | $\Box$   |               | 142                                     | 2              | 上         |              |          | Ħ               |          |                      | ╛        | ╛        |  |  |
|   |                  | 43        | Ц           | 4        | 4           | 4        | _        |          | L        | Ш          | Ц        |          | _  | 93                      | $\perp$     | $\bot$    | Į      | F            |          |          |          | $\Box$   |               | 14                                      |                | 4         | 匚            | Ц        | Ц               |          | П                    | 4        | $\Box$   |  |  |
|   | -                | 44        | -           | +        | +           | ┪        | $\dashv$ | Н        | -        | $\vdash$   | Н        | $\vdash$ |    | 94<br>95                | +-          | +         | ╀      | ╀            | Н        | Н        | Н        | $\dashv$ | $\vdash$      | 144                                     |                | +-        | •            | Н        | $\vdash \vdash$ | ႕        | ${oldsymbol{arphi}}$ | -        | $\dashv$ |  |  |
|   |                  | 46        | 1           | +        | 1           | 1        |          |          | Т        | Н          | Н        |          | _  | 96                      | +           | ۲         | T      | ۲            | Н        | H        | Н        | $\dashv$ | $\vdash$      | 146                                     |                | +         |              | Н        | Н               | $\dashv$ | H                    | ┪        | ᅱ        |  |  |
|   |                  | 47        | $\Box$      | コ        | コ           | コ        |          |          |          |            | 口        |          | -  | 97                      | 1           | I         | L      |              |          |          |          |          |               | 147                                     | 7              | I         |              |          | 口               | ╛        |                      | コ        | J        |  |  |
|   |                  | 48<br>49  | _           | +        | 4           | 4        | _        | Н        | H        | $\vdash$   | dash     | -        |    | 98                      | $\bot$      | F         | L      | $\vdash$     | Ц        | П        |          | 4        |               | 148                                     |                | $\Gamma$  |              | Щ        | Ц               | $\Box$   | $\Box$               | 4        | _        |  |  |
|   |                  | 50        | $\dashv$    | $\dashv$ | $\dashv$    | ┥        | -        | -        | $\vdash$ | Н          | $\dashv$ | $\vdash$ |    | 99                      | ╅           | +         | ╀      | ╀            | Н        | $\dashv$ | $\dashv$ | $\dashv$ | $\vdash$      | 149                                     |                | +-        | <del> </del> | Н        | $\vdash \vdash$ | ᅱ        | $\vdash$             | +        | $\dashv$ |  |  |
| , |                  |           |             | _        |             |          |          |          |          | _          | _        |          |    |                         |             | -         |        | _            |          |          |          | _        | _             | 1.00                                    |                | -         | 1            |          | Щ.              |          | Щ.                   |          |          |  |  |